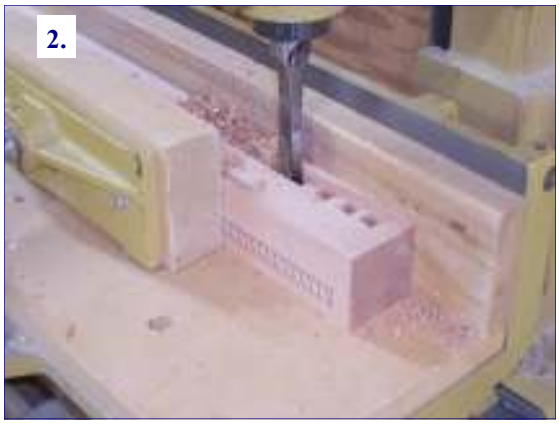
The WoodWorker's Edge

Draw-leaf Game Table

Layout the area for the tenons. The tenons are 3/8" thick x 4-1/2" long x 1-1/4" deep and offset to the inside.



Create the tenons using the step method to eliminate undue stress on your chisel and bit. The mortises will meet in the leg stock.

With the mortises cut, layout a line that is 7/8" below the bottom edge of the apron. Draw the line completely around the leg. This line will be the start or stop line for the flutes. Set a 1/4" fluting bit into the router table so that it cuts just 3/16" wide. On your fence place a line that is centered with the center of the bit. After you have completed the layout of the flutes across the leg face, use that to align the cuts of the flutes. Plunge onto the bit with the lines matched and cut the entire balance of the leg to the floor. Next, turn the blank and begin at the floor area and cut the flute up to where the line on the leg and the line on the fence meet. This will create the second inside flute.

Reposition the fence for the outside flute cuts and repeat the process to cut the second set of flutes. The screw in the end of the leg blank helps to raise the blank from the bit to end the cut or to plunge into the correct position to begin the cut.

Because one cheek of the tenon is bare faced, you only need to make a shoulder cut on the face side of the aprons. Set the blade height to 3/8" and the fence to cut a 1-1/4" tenon, then make the cut. Raise the blade to 1/2" and without moving the fence, make the shoulder cuts for then ends of the tenon.

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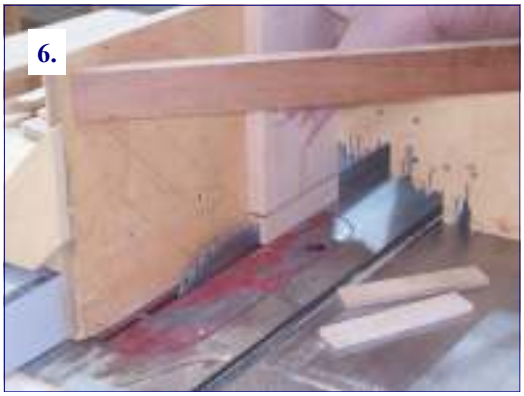
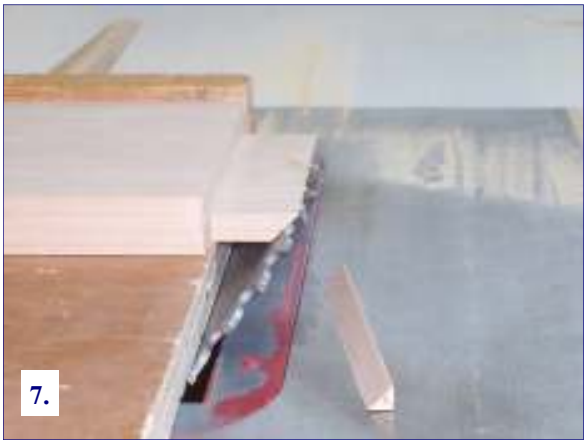


Make the cheek cut at the table saw using the tenoning jig. Next, move to the band saw and remove the material at the edges of the aprons.



Because the tenons will meet in the mortises, you will need to make a 45 degree cut on the tenon ends. Make sure to have the face side of the apron up when making this cut. And remember to keep the tenon as long as possible.

Make the dado cut to house the center support using a straight edge jig and a pattern bit. The location is centered in the long aprons. The cut needs to be a 1/4" in depth and stop a 1/2" from the bottom edge of the aprons. Square out the ends with your chisels.

Time for some assembly. Add glue to the mortises and the tenons, then slide the joint together. Make sure that the top edge of the apron and the top edge of the legs align. I like to assemble the long set of aprons, allow them to dray, then glue up the short aprons to finish assembling the base.

Slide the center support in place and attach with screws. Use a tapered countersink and plug the holes with matching plugs.

Draw-leaf Game Table

Cut the plywood for the tops to size according to the cut sheet, then create the 1/4" deep groove with a router bit. Run the cut from both faces of the plywood to insure that it is centered.

Mill the edging material to the thickness of your plywood and begin to make the tongues using a "two-step" rabbet cut.

The second step is to turn the stock on its edge and complete the tongue. Check the fit. Because we cut from both faces to insure that the grove was in the middle of our tops, you may have a tongue that is slightly thicker than a 1/4".

This is what you are looking to accomplish. A snug fit!

Once the tongues are created, rip the stock into to pieces that are 1-1/4" wide.

Cut the 45 degree angles at the ends of the pieces and carefully fit the edging to the plywood tops.

Draw-leaf Game Table

Add glue to the groove as well as the tongue and clamp the long pieces in place, checking the position at the corners. I keep my clamps on the bottom face of each piece to help protect the panel from damage or staining. When dry, attach the others pieces of edging. Do not forget to add glue to the mitered corners.

Sand the edging to the plywood pieces. This is a place to be careful. I add pencil lines to the joint and when the lines disappear—the surface is level.

Mill the pieces that are to be your slides to size. There are two points of interest. First, move in from one end to 16". Draw a line across the piece on the 1-1/2" side. At that same end, put a mark that is equal to the thickness of your top. Connect the lines and the smaller triangle area is to be removed. This allows the leaf to rise the amount necessary to hold the main top at the correct height.

I like to cut my tapers at the jointer. Layout the cut by marking a line that is 1/2 of the total bevel length (8"). Set the knives to cut 1/2 of the total taper (11/32"). Cut the first step with a regular pass at the jointer stopping as the cut reaches the layout line.

Reverse the cut and "wheelie" down the area of the first cut while passing the piece over the knives. This cut begins at the 16" line and will taper the cut the final dimensions.

Draw-leaf Game Table

Hold the tapered end of the slides against that bench and measure from the bench to the top edge of the piece in two places. At the narrow end and right where the slide crosses the center support. This will give you the depth of the notches for the slides that need to be placed in the aprons (narrow end) and support.

Draw a line that is 3" in from the edge of the base on the two short aprons and use a straight edge to transfer that line to the center support. Layout the locations of the notches by moving to the inside at one end of the table and to the outside at the other. For the location at the center support, layout in both directions.

Test fit the slides. The slides, while set in position with the ends against one apron, should sit flush with the top edge of the apron and extend 1-1/4" beyond the apron.

The notches in the aprons are 1" wide. Draw the area to be removed, make a series of thin kerfs, and wedge the waste out with your chisel. Dress the bottom to your lines for each notch location.

Position the tops in place and transfer the location of the slides onto your leaves. Remove the top pieces and square the lines across the leaves.

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Next, place the slide onto the leaf with the tapered edge down and mark the intersection where the slide and the edging meet. Cut the slide at that point. Use a miter saw and cut while holding the tapered edge against that table. This will cut a slight bevel on the end of the slide.

Use a 5/8" forstner bit to drill the holes for the screws . Set the depth stop at the drill press to leave 3/4" and drill on the tapered edge. Use a tapered countersink centered at each hole to attach the slides to the leaves with #8 x 1-1/4" screws.

Set the leaves and fixed top onto the base and temporarily attach the fixed top into the apron.

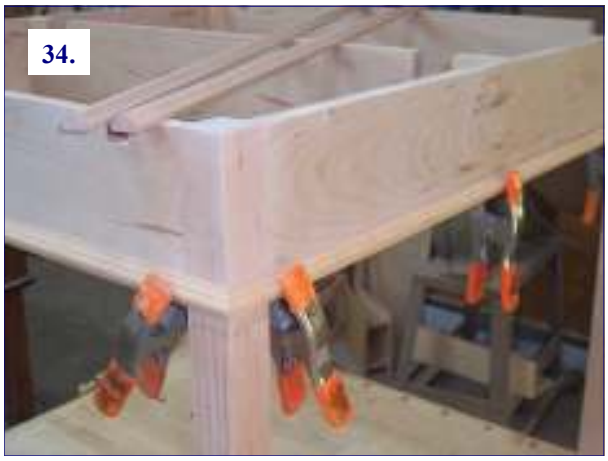
Set the main top in place and hold it with a series of spring clamps at one end. Slide the opposing leaf out until the main top settles into position. The drag should be snug but if it is too tight, adjust the depth of the notch in the center support.

Use a 1/16" drill bit as a guide hole to locate the position of the 3/4" dowel that will hold the main top in place as the leaves are pulled. The main top will slide up on the dowels and not change its relationship to the fixed top. Remove the tops, drill a 3/4" hole in both the fixed top and the main top, and attach the dowel into the main top.

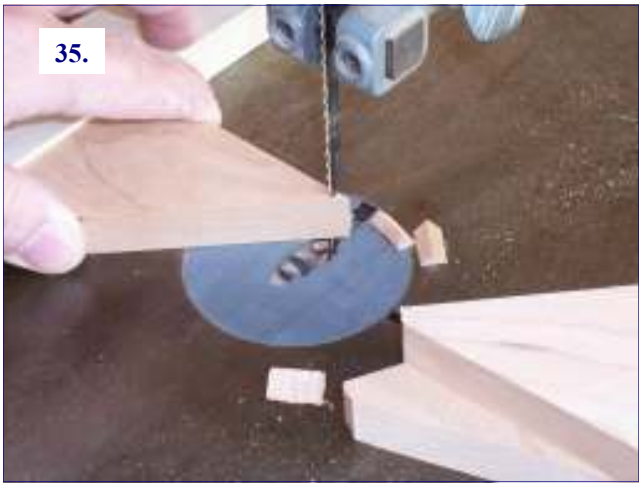
Draw-leaf Game Table

Along with the dowel you will need to add the stop blocks at the ends of each slide. These need to be removable in order to finish the table.

The details begin with the molding that affixes to the lower edge of the apron and wraps completely around the table. Profile two edge of a 7/8" thick piece, then slice the molding to 1/2". You need four pieces of finished molding.



The molding attaches to the base with glue and brads. Miter the corners as shown and a thin bead of glue is required. Too much will squeeze out onto the aprons.



Begin the pierced brackets with the 3-1/4" x 9/16" stock. Cut the triangle so that both legs from the 90 degree corner are 3-1/4" long. Set the bandsaw fence 3" from the blade and trim both ends. This sets the thickness of the ends of the brackets.

Set the bracket at the mortise machine to cut the square hole in the center. Place a scrap beneath the piece to lessen any "blow out" on the back face. Locate the edges of the first bracket in order to position the remaining brackets for this step.

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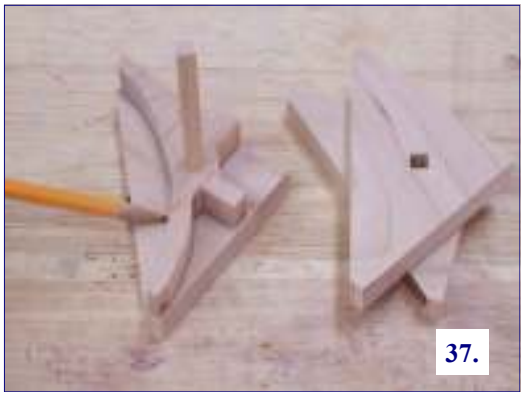

With the holes mortised into the brackets, complete the piece at the band saw and final sand. Fit a piece into the 1/4" hole to locate the position for the remaining brackets. Transfer the design onto the other seven pieces.

Cut the balance of the brackets at the band saw, then sand at the spindle sander and clean up with your rasps.

The pierced brackets fit into the corners where the aprons meet the legs. Use a small amount of glue and 1/8" dowels to secure.

I stained using the water based aniline dye in Early American Cherry. Lightly sand with a 400 grit paper and you are ready to apply a sanding sealer and the topcoat. I selected a pre-catalyzed lacquer for my topcoat. I think the table surface needs the added protection.

Final Project Photo